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ART UNIT	PAPER NUMBER
2163	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/733,752	BARSNESS ET AL.
Office Action Summary	Examiner	Art Unit	
	Michael Le	2163	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _20 February 2007_.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-29, 32-38, 41-43, 46 and 47_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) _____ is/are rejected.

7)☒ Claim(s) _1-29, 32-38, 41-43, 46 and 47_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Summary and Status of Claims

1.   This Office Action is in response to Applicant's reply filed February 20, 2007.

2.   Claims 30, 31, 39, 40, 44 and 45 are cancelled.

3.   Claims 1-29, 32-38, 41-43, 46 and 47 are pending.

4.   Claims 1-5, 8, 10-12, 14-29, 32-35, 37, 38, 42, 43, and 47 are rejected under 35 U.S.C. 101.

5.   Claims 1-6, 8, 9, 11-13, 15-24, 29, 32-36, 38, 41, 43 and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakuya et al. (US Patent 5,680,614), in view of Zuzarte (US Patent Pub 2003/0084025).

6.   Claims 7, 10, 14, 25-28, 37, 42 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakuya et al. (US Patent 5,680,614), in view of Zuzarte (US Patent Pub 2003/0084025), further in view of Geppert et al. (US Patent 6,463,429) of record.

7.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections – 35 USC § 101

8.   **Claims 1-5, 8, 10-12, 14-29, 32-35, 37, 38, 42, 43, and 47 are rejected under 35 U.S.C. 101** because the claimed invention is directed to non-statutory subject matter.

9.   The basis of this rejection is set forth in a test of whether the invention is categorized as a process, machine, manufacture or composition of matter and if the invention produces a useful, concrete and tangible result. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural

phenomena) are found to be non-statutory subject matter. For a method claim and claims

directed toward software per se to pass muster, the claims must produce a useful, concrete and

tangible result.

10.   Under current policy guidelines, claims which end with a conditional result are

considered open ended. It is true that the claims produce a useful, concrete and tangible result

when the condition is met. However, if the condition is not met, there is no result produced and

as a result, the claims fail the test. Such is the case with claims 1-5, 8, 10-12, 14-29, 32-35, 37,

38, 42, 43, and 47 and therefore they are rejected as being directed to non-statutory subject

matter.

11.   To expedite a complete examination of the instant application, the claims rejected under

35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of

application amending these claims to overcome the rejection.

Claim Rejections - 35 USC § 103

12.   **Claims 1-6, 8, 9, 11-13, 15-24, 29, 32-36, 38, 41, 43 and 46 are rejected under 35**

U.S.C. 103(a) as being unpatentable over Bakuya et al. (US Patent 5,680,614) hereinafter

"Bakuya", in view of Zuzarte (US Patent Pub 2003/0084025).

13.   In regards to **claim 1**, Bakuya discloses an apparatus comprising:

        a.   at least one processor (Bakuya: Fig. 1; col. 5, lines 14-27)[1];

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[1] It is clear from this description that the database system resides on a computer, which includes a processor and a
type of memory, the database residing on the memory.

b.   a memory coupled to the at least one processor (Bakuya: Fig. 1; col. 5, lines 14-27);

c.   a database residing in the memory (Bakuya: Fig. 1; col. 5, lines 14-27);

d.   a range constraint defined for the database, the range constraint including at least one limit (Bakuya: Fig. 6); and

e.   a database manager residing in the memory and executed by the at least one processor, wherein the range constraint defines a range that includes the at least one limit, and wherein the database manager allows entry of data into the database when the data lies within the range (Bakuya: Fig. 1, element 12 (database manager); fig. 6 (range constraint with at least one limit); Col. 9, lines 32-40).

14.   Bakuya does not expressly disclose at least one limit that is dynamically determined from data in the database.

15.   Zuzarte discloses selecting a column or generating a virtual column and performing a statistical analysis on the particular column regarding information such as high and low values. From the statistical information, Zuzarte discloses creating constraints that reflect the statistical characteristic of the particular column (Zuzarte: para. 0020, lines 6-12).

16.   Bakuya and Zuzarte are analogous art because they are directed to the same field of endeavor of database management.

17.   At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify the apparatus of Bakuya by adding the feature of at least one limit that is dynamically determined from data in the database, as taught by Zuzarte.

18.   The motivation for doing so would have been because constraining the values of a column to a particular range allows for database queries to be optimized (Zuzarte: para. 0003).

19.   In regards to **claim 2**, Bakuya and Zuzarte disclose the apparatus of claim 1 wherein the database comprises at least one database table comprising at least one column, and wherein the range constraint is defined for a selected column (Bakuya: Fig. 6 (constraint defined for column "EMPLOYEE_NUMBER")).

20.   In regards to **claim 4**, Bakuya discloses the apparatus of claim 2 wherein the at least one limit is dynamically determined from data in a column that is different than the selected column (Zuzarte: para. 0020, lines 2-4, 6-12)[2].

21.   In regards to **claims 3 and 5**, Bakuya and Zuzarte disclose the apparatus of claim 2 wherein the at least one limit is dynamically determined from data in the selected column, wherein the at least one limit is dynamically determined by performing statistical analysis on data in the database (Zuzarte: para. 0020, lines 6-12).

22.   In regards to **claim 6**, Bakuya and Zuzarte disclose the apparatus of claim 1 wherein the range constraint defines a range that includes the at least one limit, and wherein the database manager allows entry of data into the database when the data lies within the defined range and does not allow entry of data into the database when the data lies outside the defined range (Bakuya: col. 9, lines 36-40).

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[2] If a virtual column is chosen for the statistical analysis, the virtual column is created from multiple of the actual columns. Thus, the statistical analysis to derive the statistical constraints are derived from data from columns different from the selected column.

23.   **Claim 8** is substantially similar to the combination of claims 1 and 2 and is rejected for

the same reasons.

24.   **Claim 9** is substantially similar to claim 6 and is rejected for the same reasons.

25.   In regards to **claim 11**, Bakuya and Zuzarte discloses the apparatus of claim 8 wherein

the at least one limit is dynamically determined by performing statistical analysis on data in the

selected column (Zuzarte: para. 0020, lines 6-12).

26.   **Claim 12** is substantially similar to the combination of claims 1, 2 and 4 and is rejected

for the same reasons.

27.   **Claim 13** is substantially similar to claim 6 and is rejected for the same reasons.

28.   **Claim 15** is substantially similar to a combination of claims 4 and 5 and is rejected for

the same reasons.

29.   **Claims 16-20** are substantially similar to claims 1-5 in the form of a method and are

rejected for the same reasons.

30.   **Claim 21** is substantially similar to the combination of claims 1 and 2 in the form of a

method and is rejected for the same reasons.

31.   **Claims 22-24** are substantially similar to claims 3, 4 and 5 respectively, in the form of a

method and are rejected for the same reasons.

32.   **Claim 29** is substantially similar to claim 1 in the form of a computer readable program

product and is rejected for the same reasons. In regards to the computer readable recordable

media, Bakuya and Zuzarte disclose a computer, which includes storage devices (Bakuya: col. 5,

lines 14-27).

33.   **Claims 32-36** are substantially similar to claims 2-6 respectively in the form of a

computer readable program product and are rejected for the same reasons.

34.   **Claims 38 and 41** are substantially similar to claims 8 and 9 respectively in the form of a

computer readable program product and are rejected for the same reasons. In regards to the

computer readable recordable media recited in claim 38, Bakuya and Zuzarte disclose a

computer which includes a storage device (Bakuya: col. 5, lines 14-27).

35.   **Claim 43** is substantially similar to claim 12 in the form of a computer readable program

product and is rejected for the same reasons. In regards to the computer readable recordable

media, Bakuya and Zuzarte disclose a computer, which includes a storage device (Bakuya: col.

5, lines 14-27).

36.   **Claim 46** is substantially similar to claim 13 in the form of a computer readable program

product and is rejected for the same reasons.

37.   **Claims 7, 10, 14, 25-28, 37, 42 and 47 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over Bakuya et al. (US Patent 5,680,614) hereinafter "Bakuya", in view of

Zuzarte (US Patent Pub 2003/0084025), further in view of Geppert et al. (US Patent

6,463,429) of record, hereinafter "Geppert".

38.   In regards to **claim 7**, Bakuya and Zuzarte disclose a database manager residing in the

memory and executed by the at least one processor, wherein the range constraint defines a range

that includes the at least one limit (Bakuya: Fig. 1, element 12 (database manager); fig. 6 (range

constraint with at least one limit); Col. 9, lines 32-40), and wherein:

    a.   if the data lies within the defined range, the database manager allows entry of the

data into the database (Bakuya: Col. 9, lines 36-37); and

    b.   if the data lies outside the defined range, the database manager allows provides a

warning message (Bakuya: col. 9, lines 39-40).

39.   Bakuya and Zuzarte do not expressly disclose if the data lies out side of the defined

range, the database manager allows entry of the data into the database in addition to providing a

warning message.

40.   Geppert discloses a system and method for consistency constraint management (Geppert:

Col. 4, lines 47-61). Geppert further discloses a corrective action when data is outside the range

constraint wherein a corrective action is set to be an alert sent to a responsible party (warning),

even though the query result is returned to the user (allows entry of the data into the database)

(Geppert: col. 5, lines 15-20).

41.   Bakuya, Zuzarte and Geppert are analogous art because they are from the same field of

endeavor of database range constraints.

42.   At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the combined apparatus of Bakuya and Zuzarte by modifying the database

manager to have the feature of allowing entry of the data into the database, even if the data lies

out side of the defined range and providing a warning message, as taught by Geppert.

43.   The motivation for doing so would have been because there are times when a data lies

outside the range, however, the data may still be valid. In those cases, it would be better to

notify an administrator to determine whether the data is incorrect or whether the data is correct

even though it is outside the range constraint instead of restricting the data completely (Geppert:

col. 2, lines 42-54).

44.   **Claim 10** is substantially similar to claim 7 and is rejected for the same reasons.

45.   **Claim 14** is substantially similar to claim 7 and is rejected for the same reasons.

46.   In regards to **claim 25**, Bakuya discloses the computer-implemented method for entering

data into a selected column in a database table, the method comprising the steps of:

    a. ·   defining a range constraint for the selected column, the range constraint defining a

    range that includes at least one limit (Bakuya: Fig. 1, element 12 (database manager); fig.

    6 (range constraint with at least one limit); Col. 9, lines 32-40); and

    b.   if the data to be entered lies outside of the defined range, providing a warning

    message (Bakuya: col. 9, lines 39-40).

47.   Bakuya does not expressly disclose the limit being dynamically determined from data in

the database table and if the data to be entered lies outside of the defined range, allowing entry of

data into the selected column, and in response thereto, providing a warning message.

48.   Zuzarte discloses selecting a column or generating a virtual column and performing a

statistical analysis on the particular column regarding information such as high and low values.

From the statistical information, Zuzarte discloses creating constraints that reflect the statistical

characteristic of the particular column (Zuzarte: para. 0020, lines 6-12).

49.   Geppert discloses a system and method for consistency constraint management (Geppert:

Col. 4, lines 47-61). Geppert further discloses a corrective action when data is outside the range

constraint wherein a corrective action is set to be an alert sent to a responsible party (warning),

even though the query result is returned to the user (allows entry of the data into the database)

(Geppert: col. 5, lines 15-20).

50.   Bakuya, Zuzarte and Geppert are analogous art because they are from the same field of

endeavor of database range constraints.

51.   At the time of the invention, it would have been obvious to one of ordinary skill in the art

to modify the method of Bakuya by making the limit being dynamically determined from data in

the database table, as taught by Zuzarte, and adding the condition of if the data to be entered lies

outside of the defined range, allowing entry of data into the selected column, and in response

thereto, providing a warning message, as taught by Geppert.

52.   The motivation for doing so would have been because constraining the values of a

column to a particular range allows for database queries to be optimized (Zuzarte: para. 0003).

Also, there are times when data lies outside the range, however, the data may still be valid. In

those cases, it would be better to notify an administrator to determine whether the data is

incorrect or whether the data is correct even though it is outside the range constraint instead of

restricting the data completely (Geppert: col. 2, lines 42-54).

53.   In regards to **claim 26**, Bakuya, Zuzarte and Geppert disclose wherein step (A) defines at

least one limit that is dynamically determined from data in the selected column (Zuzarte: para.

0020, lines 6-12).

54.   In regards to **claim 27**, Bakuya, Zuzarte and Geppert disclose wherein step (A) defines at least one limit that is dynamically determine from data in a column that is different than the selected column (Zuzarte: para. 0020, lines 6-12)[3].

55.   In regards to **claim 28**, Bakuya, Zuzarte and Geppert disclose wherein step (A) defines at least one limit that is dynamically determined by performing statistical analysis on data in the database table (Zuzarte: para. 0020, lines 6-12).

56.   **Claim 37** is substantially similar to claim 7 in the form of a computer readable program product and is rejected for the same reasons.

57.   **Claim 42** is substantially similar to claim 7 in the form of a computer readable program product and is rejected for the same reasons.

58.   **Claim 47** is substantially similar to claim 7 in the form of a computer readable program product and is rejected for the same reasons.

Response to Amendment

Rejection of Claims 1-47 under 35 U.S.C 101

59.   Claims 30, 31, 39, 40, 44 and 45 are cancelled rendering the rejection to them moot.

60.   Applicant's amendment to claims 1-29, 32-38, 41-43, 46 and 47 is acknowledged. Consequently, the rejection of claims 6, 7, 9, 13, 36, 41 and 46 under 35 U.S.C. 101 is withdrawn. However, due to changes in office policy, claims 1-5, 8, 10-12, 14-29, 32-35, 37, 38,

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[3] If a virtual column is chosen for the statistical analysis, the virtual column is created from multiple of the actual columns. Thus, the statistical analysis to derive the statistical constraints are derived from data from columns different from the selected column.

42, 43, and 47 remain rejected under 35 U.S.C. 101 are maintained for the reasons outlined in the

rejection above.

Response to Arguments

Rejection of claims 1-6, 8, 9, 11-13, 15-24, 29, 30, 32-36, 38, 39, 41, 43, 44 and 46 under 35

U.S.C. 102(b)

61.   Claims 30, 39 and 44 are cancelled rendering the rejection to them moot.

62.   Applicant's arguments in regards to the rejections to claims 1-6, 8, 9, 11-13, 15-24, 29,

32-36, 38, 41, 43 and 46 under 35 U.S.C. 102(b), have been fully considered but they are moot in

view of the new grounds of rejection set forth above as necessitated by Applicant's amendment.

Rejection of claims 7, 10, 14, 25-28, 37, 42 and 47 under 35 U.S.C. 103(a)

63.   Applicant's arguments in regards to the rejections to claims 7, 10, 14, 25-28, 37, 42 and

47 under 35 U.S.C. 103(a), have been fully considered but they are moot in view of the new

grounds of rejection set forth above as necessitated by Applicant's amendment.

Conclusion

64.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

65.   A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

66.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Michael Le whose telephone number is 571-272-7970. The

examiner can normally be reached on Mon-Thurs : 9:30am-6pm, Fri: 8am-4:30pm.

67.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

68.   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael Le
Art Unit 2163
May 13, 2007

DON WONG
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